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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,072	09/18/2003	Ji-Sung Ko	50712/DBP/Y35	1453
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CHRISTIE, PARKER & HALE, LLP			QUARTERMAN, KEVIN J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/667,072	KO ET AL.	
	Examiner	Art Unit	
	Kevin Quarterman	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuura (US 5,670,843).

4. Regarding independent claim 1, Figure 1 of Matsuura shows a plasma display panel comprising a first substrate (3) and a second substrate (7) opposing one another with a predetermined gap therebetween, the first substrate and the second substrate being substantially rectangular in shape with long side edges and short side edges, and being interconnected by frit (13) deposited between the first substrate and the second substrate. Figure 2 of Matsuura shows the substrates having a predetermined discharge region (area inside bonding material 13) and predetermined non-discharge regions (area outside of bonding material 13) that surround the discharge region; and barrier ribs (5a) mounted between the first substrate and the second substrate, wherein the barrier ribs (5a) are mounted at least partly on the discharge region, and at least partly on the non-discharge regions (5b) that are adjacent to the long side edges of the substrates.

5. Regarding claim 2, Figure 2 of Matsuura shows the barrier ribs defining discharge cells (area between adjacent ribs 5a).

6. Regarding claim 3, Figures 1 and 2 of Matsuura show the long side edges being top and bottom edges of the substrates, and the short side edges being left and right edges of the substrates.

7. Regarding claim 4, Figure 2 of Matsuura shows the barrier ribs formed in a striped pattern (see also col. 5, ln. 1-2).

8. Regarding independent claim 18, Figure 1 of Matsuura shows first and second substrates (3, 7) facing one another and having a gap therebetween, each substrate being substantially rectangular in shape with long side edges and short side edges and

having a discharge region (area inside of bonding material 13) and non-discharge regions (area outside of bonding material 13) that surround the discharge region; a plurality of barrier ribs (5b) mounted between the substrates on the discharge region; and at least one barrier rib (5a) mounted between the substrate on at least one of the non-discharge regions that are adjacent to the long side edges of the substrates.

9. In regards to the functional recitation "...so as to provide support to the substrates when a sealing pressure is applied to the substrates," the Examiner notes that apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Since Matsuura teaches each of the structural limitations of independent claim 18, the Examiner notes that the barrier ribs are capable of performing the function of providing support to the substrates during application of sealing pressure to the substrates.

10. Claims 1-5, 8, 11, 15-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano (US 6,414,434).

11. Regarding independent claim 1, Figure 1 of Nakano shows a plasma display panel comprising a first substrate (1) and a second substrate (3) opposing one another with a predetermined gap therebetween, the first substrate and the second substrate being substantially rectangular in shape with long side edges and short side edges, and being interconnected by frit (10) deposited between the first substrate and the second substrate. Figure 2 of Nakano shows the substrates having a predetermined discharge region (9) and predetermined non-discharge regions that surround the discharge region, and barrier ribs (6, 11) mounted between the first substrate and the second substrate,

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wherein the barrier ribs (6) are mounted at least partly on the discharge region, and at least partly (11) on the non-discharge regions that are adjacent to the long side edges of the substrates.

12. Regarding claim 2, Figure 1 of Nakano shows the barrier ribs (6) defining discharge cells (7).

13. Regarding claim 3, Figures 1 and 2 of Nakano show the long side edges being top and bottom edges of the substrates, and the short side edges being left and right edges of the substrates.

14. Regarding claim 4, Figure 1 of Nakano shows the barrier ribs (6) formed in a striped pattern.

15. Regarding claim 5, Figure 2 of Nakano shows the barrier ribs (6) formed to extend in a direction that is substantially parallel to the short side edges of the first substrate and the second substrate.

16. Regarding claim 8, Figure 2 of Nakano shows the barrier ribs (11) mounted on at least one of the non-discharge regions adjacent to the long side edges of the substrates separated from the barrier ribs (6) mounted on the discharge region.

17. Regarding claim 11, Figure 2 of Nakano shows the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges arranged such that one of the barrier ribs mounted on the non-discharge regions corresponds to a plurality of the barrier ribs mounted on the discharge region.

18. Regarding claim 15, Figure 2 of Nakano shows corners of the barrier ribs (11) mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates rounded.

19. Regarding claim 16, the method of making the device is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the sealing process cited in the claim has not been given patentable weight. Nakano teaches all of the structural limitations of the claim.

20. Regarding claim 17, the method of making the device is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the sealing process cited in the claim has not been given patentable weight. Nakano teaches all of the structural limitations of the claim.

21. Regarding independent claim 18, Figure 1 of Nakano shows first and second substrates (1, 3) facing one another and having a gap therebetween, each substrate being substantially rectangular in shape with long side edges and short side edges. Figure 2 of Nakano shows a discharge region (9) and non-discharge regions that surround the discharge region; a plurality of barrier ribs (6) mounted between the substrates on the discharge region; and at least one barrier rib (11) mounted between the substrate on at least one of the non-discharge regions that are adjacent to the long side edges of the substrates.

22. In regards to the functional recitation "...so as to provide support to the substrates when a sealing pressure is applied to the substrates," the Examiner notes that apparatus claims must be distinguished from the prior art in terms of structure

rather than function (MPEP § 2114). Since Nakano teaches each of the structural limitations of independent claim 18, the Examiner notes that the barrier ribs are capable of performing the function of providing support to the substrates during application of sealing pressure to the substrates.

23. Regarding claim 20, Figure 2 of Nakano shows the at least one barrier rib (11) formed separately from the plurality of barrier ribs (6).

24. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Moon (US 6,495,958).

25. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

26. Regarding independent claim 1, Figure 5 of Moon shows a plasma display panel comprising a first substrate (21) and a second substrate (22) opposing one another with a predetermined gap therebetween, the first substrate and the second substrate being substantially rectangular in shape with long side edges and short side edges, and being interconnected by frit (col. 4, ln. 14-20) deposited between the first substrate and the second substrate. Figure 7 of Moon shows the substrates having a predetermined discharge region (area inside of frit layer 71) and predetermined non-discharge regions that surround the discharge region, and barrier ribs (58) mounted between the first

substrate and the second substrate, wherein the barrier ribs are mounted at least partly on the discharge region, and at least partly on the non-discharge regions that are adjacent to the long side edges of the substrates.

27. Regarding claim 2, Figure 5 of Moon shows the barrier ribs defining discharge cells (area between adjacent ribs 58).

28. Regarding claim 3, Figure 5 of Moon shows the long side edges being top and bottom edges of the substrates, and the short side edges being left and right edges of the substrates.

29. Regarding claim 4, Figure 7 of Moon shows the barrier ribs (58) formed in a striped pattern.

30. Regarding claim 5, Figure 7 of Moon shows the barrier ribs (58) formed to extend in a direction that is substantially parallel to the short side edges of the first substrate and the second substrate.

31. Regarding claim 6, Figure 7 of Moon shows the barrier ribs (part of 58 outside of frit 71) mounted on at least one of the non-discharge regions adjacent to the long side edges of the substrates integrally formed with the barrier ribs (part of 58 inside of frit 71) mounted on the discharge region.

32. Regarding claim 7, Figure 7 of Moon shows the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates extended until contacting frit (71).

33. Regarding claim 8, Figure 7 of Moon shows the barrier ribs (part of 58 outside of frit 71) mounted on at least one of the non-discharge regions adjacent to the long side

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edges of the substrates separated by the frit boundary (71) from the barrier ribs (part of 58 inside of frit 71) mounted on the discharge region.

34. Regarding claim 9, Figure 7 of Moon shows the barrier ribs (58) mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates extending until contacting the frit (71).

35. Regarding claim 10, Figure 7 of Moon shows the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates arranged such that each of the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates corresponds to one of the barrier ribs mounted on the discharge region.

36. Regarding claim 11, Figure 7 of Moon shows the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges arranged such that one of the barrier ribs mounted on the non-discharge regions corresponds to a plurality of the barrier ribs mounted on the discharge region.

37. Regarding claim 12, Figure 7 of Moon shows the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges extend in a direction that is substantially parallel to the short side edges until contacting the frit.

38. Regarding claim 13, Figure 7 of Moon shows a width in a direction that is substantially parallel to the long side edges of the substrates of the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates substantially identical to a width in the direction that is substantially parallel to the long side edges of the substrates of an area occupied by all the barrier ribs

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mounted on the discharge region, the area also including spaces between the barrier ribs.

39. Regarding claim 14, Figure 7 of Moon shows a width in a direction that is substantially parallel to the long side edges of the substrates of the barrier ribs mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates substantially identical to a width in the direction that is substantially parallel to the long side edges of the substrates of an area occupied by a predetermined number of the barrier ribs mounted on the discharge region, the area including spaces between the barrier ribs.

40. Regarding claim 15, Figure 5 of Moon shows corners of the barrier ribs (58) mounted on the at least one of the non-discharge regions adjacent to the long side edges of the substrates rounded.

41. Regarding claim 16, the method of making the device is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the sealing process cited in the claim has not been given patentable weight. Moon teaches all of the structural limitations of the claim.

42. Regarding claim 17, the method of making the device is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the sealing process cited in the claim has not been given patentable weight. Moon teaches all of the structural limitations of the claim.

43. Regarding independent claim 18, Figure 5 of Moon shows first and second substrates (21, 22) facing one another and having a gap therebetween, each substrate

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being substantially rectangular in shape with long side edges and short side edges.

Figure 7 of Moon shows a discharge region (area inside of frit layer 71) and non-discharge regions that surround the discharge region; a plurality of barrier ribs (58) mounted between the substrates on the discharge region; and at least one barrier rib (part of 58 outside of frit 71) mounted between the substrate on at least one of the non-discharge regions that are adjacent to the long side edges of the substrates.

44. In regards to the functional recitation "...so as to provide support to the substrates when a sealing pressure is applied to the substrates," the Examiner notes that apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Since Moon teaches each of the structural limitations of independent claim 18, the Examiner notes that the barrier ribs are capable of performing the function of providing support to the substrates during application of sealing pressure to the substrates.

45. Regarding claim 19, Figure 7 of Moon shows the at least one barrier rib formed integrally with one of the plurality of the barrier ribs.

Conclusion


46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (US 6,809,476) discloses a plasma display panel with damage control. Kado (US 6,761,605) discloses a plasma display panel with improved luminescent properties.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kevin Quarterman
Examiner
Art Unit 2879